



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,076	10/24/2003	Ronghua Wei	SWRI-2890-04	3382
23770	7590	03/24/2006	EXAMINER	
PAULA D. MORRIS MORRIS & AMATONG, P.C. 10260 WESTHEIMER, SUITE 360 HOUSTON, TX 77042-3110			LAVILLA, MICHAEL E	
			ART UNIT	PAPER NUMBER
			1775	

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/693,076	Applicant(s) WEI ET AL.	
	Examiner Michael La Villa	Art Unit 1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-96 is/are pending in the application.
 4a) Of the above claim(s) 7-10 and 12-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 11, and 23-96 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20040609, 20040715</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of a tubular structure comprising an amorphous carbon coating in the reply filed on 14 March 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 1-6, 11, and 23-96 read on the elected subject matter.
3. The requirement is still deemed proper and is therefore made FINAL.
4. Claims 7-10 and 12-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:
6. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
7. Claims 1-6, 11, and 23-96 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
8. Regarding Claim 1, it is unclear whether the definition at paragraph 9 means that the phrase "substantially uniform coating" requires the uniformity of Claims 23-27 or not. If so, it is unclear what Claims 23-27 require that is not already required by previous claims, such as Claim 1 with respect to Claim 23. If not, it is unclear

Art Unit: 1775

what applicant means by the phrase “substantially uniform coating.” What variation in thickness is to be tolerated?

9. Regarding Claims 28 and 45, it is unclear whether the definition at paragraph 9 means that the phrase “substantially uniform amorphous carbon coating” requires the uniformity of Claims 33-36, 50-53, and 85-88, or not. If so, it is unclear what Claims 33-36, 50-53, and 85-88 require that is not already required by previous claims, such as Claim 28 with respect to Claim 33. If not, it is unclear what applicant means by the phrase “substantially uniform amorphous carbon coating.” What variation in thickness is to be tolerated?
10. Regarding Claims 3-5, 30-33, and 65-67, it is unclear what is meant by the phrase “at least about ... micrometers or more.” Is the thickness “at least 2” microns, for Claim 3, for example, or something more than two microns? Is “or more” superfluous language?
11. Regarding Claims 62 and 63, it is unclear whether these claims specify that the interior surface of the tubular structure is to comprise at least one metal. If so, shouldn't the claim read “wherein said interior surface comprises at least one metal”? It is unclear whether the sequential gradient is to be an additional claim limitation. It is unclear what is the antecedent basis of the phrase “said metal” as the tubular structure is to comprise “at least one metal.” It is unclear whether “center” refers to the center of the tubular structure layer or to the central axis of the tubular structure. It is unclear how the “interior surface” comprises an

Art Unit: 1775

amorphous carbon deposition product, while also possessing the claimed
“sequential gradient.”

12.Regarding Claims 64-67, it is unclear what is the antecedent basis of the phrase
“said coating.” Is this the “amorphous carbon coating” alone?

13.Regarding Claims 68-72 and 74-84, it is unclear how these claims are compatible
with a gaseous deposition product that comprises “amorphous carbon coating,”
as required by independent Claim 45. If these claims describe additional layers
to the amorphous carbon layer, it is unclear what is the claimed structural
arrangement.

Conclusion


14.Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Michael La Villa whose telephone number is
(571) 272-1539. The examiner can normally be reached on Monday through
Friday.

15.If attempts to reach the examiner by telephone are unsuccessful, the examiner’s
supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone
number for the organization where this application or proceeding is assigned is
571-273-8300.

Art Unit: 1775

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael La Villa
20 March 2006


MICHAEL E. LAVILLA PH.D.
PRIMARY EXAMINER